# Research Perspectives on Healthy Communities

Healthy Communities by Design for All Ages

Everett Events Center, Everett, WA September 25, 2009

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#### Overview

- What is the problem/problems?
- What has changed in the last several decades?
- What is known about the relationship between environment and behavior?
- What research challenges exist?
- What can we learn by studying environment and behavior?
- How can this knowledge improve lives?



### What is the problem/problems?

"Recent" past (last 30-40 years)

- Weight gain
- Increase in chronic diseases
- Less social interaction

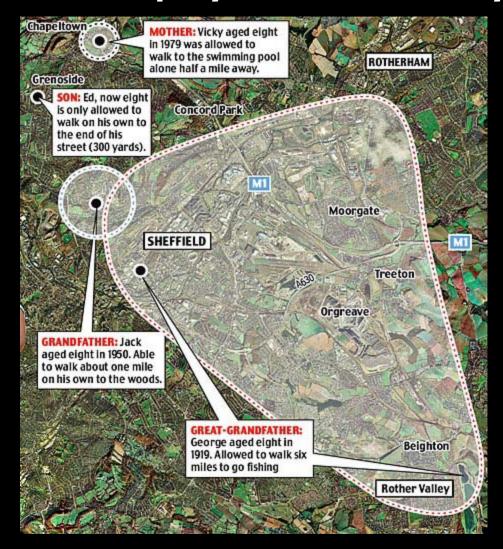
Behaviors have changed

# What has changed in the last several decades?

- Physical activity
  - Decrease in daily lives
  - Smaller spatial realm
  - Transportation "efficiencies"
  - Desk jobs
- Diets
  - Portion sizes
  - Preparations
  - Shopping/eating habits



### Decreased physical activity realm





#### Modern conveniences









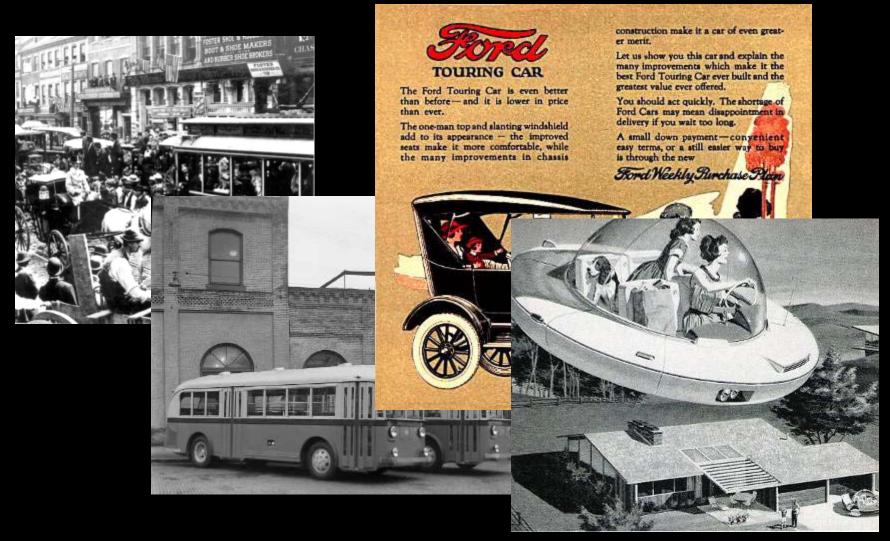
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#### Modern conveniences



#### A worldwide crisis?





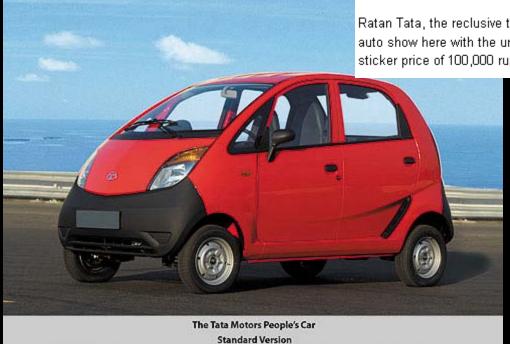
#### A worldwide crisis?

### India's Tata group to launch world's cheapest car

Jan 9, 2008

NEW DELHI (AFP) — India's giant Tata Group will this Thursday unveil the world's cheapest car, which analysts say could revolutionise prices worldwide.

Ratan Tata, the reclusive tycoon who heads the tea-to-steel conglomerate, will kick off an auto show here with the unveiling of the long-awaited "People's Car", which will carry a sticker price of 100,000 rupees or 2,500 dollars.



## Food preparations





Original 8-ounce bottle 97 calories



12 ounce can 145 calories



**20-ounce bottle** 242 calories

#### Cheeseburgers



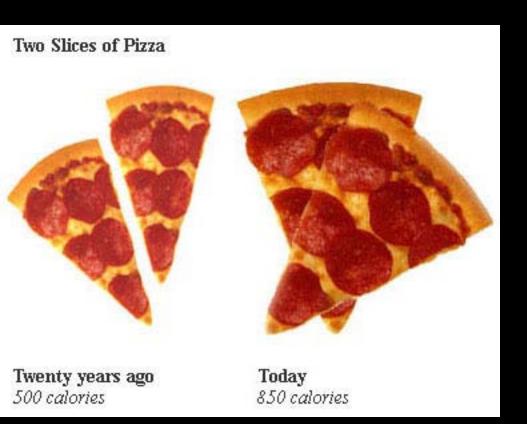
Twenty years ago 333 calories



Today's Burger 590 calories



## Food preparations





### Food preparations

#### Bagel

Cup of Coffee



Twenty years ago
Coffee with milk and sugar
8 ounces
45 calories



**Today**Grande café mocha with whip, 2% milk
16 ounces
330 calories



Twenty Years Ago 3-inch diameter 140 calories



Today—Noah's Plain Bagel 5-6-inch diameter 350 calories



# What is known about the relationship between environment and behavior?

- From an objective/emprical research perspective, <u>not much is known</u>
- Cross sectional studies have limitations
- Big assumptions are made, e.g.,
  - The environment around the home location affects overall behavior
- Very little empirical and objective information on behavior in time and space



### What research challenges exist?

- Measurements are costly
- Measurements take time
- Measurements are difficult
  - Technological limitations
  - Burdensome on participants
- Trusted methods are in development



# What can we learn by studying environment and behavior?

 Environment has had an effect on behaviors related to energy balance

- Excess 500 calories / day = I pound / week
  2 x 20 fl. oz. soda per day
  2 hr walking per day
- Any change in behavior can make a difference



# How can this knowledge improve lives?

- Even minor environmental changes may have an effect on behavior
- Knowing the relationship between environment and behavior can influence
  - Environmental design
  - Policy (e.g., zoning, business permitting, economic)
  - Focus on those most at risk (e.g., subsidies for healthy foods)



#### Why do we need additional research?

- Very little detailed information exists
  - What do people do?
  - Where do they go?
  - Where do they shop?
  - What do they eat?

 We are starting to collect and process some of this type of data



## A start at getting objective data

 Measured and classified using automated methods



#### Questions?

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